



U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
SANTA CLARA VALLEY DUDLEYA
Dudleya setchellii



CLASSIFICATION: Endangered
Federal Register Notice 60:6671; February 3, 1995
http://ecos.fws.gov/docs/federal_register/fr2779.pdf
(125 KB)

STATE LISTING STATUS AND CNPS
The California Native Plant Society has placed it on List 1B (rare or endangered throughout its range). Although the species has not been officially listed by the State of California, the Department of Fish and Game considers it to be "very threatened."

CRITICAL HABITAT: Not designated

RECOVERY PLAN: Final
Recovery Plan for Serpentine Soil Species of the San Francisco Bay Area; September 30, 1998.
http://ecos.fws.gov/docs/recovery_plan/980930c_v2.pdf (22 MB)

5-YEAR REVIEW: Started March 25, 2009
<http://www.fws.gov/policy/library/E8-4258.html>

DESCRIPTION

Santa Clara Valley dudleya is a low-growing perennial of the stonecrop family (Crassulaceae). It has fleshy, glabrous (hairless) leaves. The oblong to triangular, slightly glaucous (covered with a whitish or bluish waxy or powdery film) leaves are 3 to 8 centimeters (1 to 3 inches) long and 7 to 15 millimeters (0.3 to 0.6 inch) wide.

Two or three flowering stems grow 5 to 20 centimeters (2 to 8 inches) in mid to late spring. The pale yellow petals are 8 to 13 millimeters (0.3 to 0.5 inch) long.

There are two related plants in the area, both subspecies of *Dudleya cymosa* (canyon liveforever). *D.c* ssp. *Cymosa* has bright yellow to red petals rather than pale yellow. *D.c* ssp. *paniculata* has oblong to oblanceolate (narrowly elongate and widest at the tip) leaves (in contrast to the oblong-triangular leaves of Santa Clara Valley dudleya. It also has more rebranching of the inflorescence branches and longer pedicels.

See Hickman (1993) in General Information about California Plants, below, for a detailed description of these species.

Dudleya setchellii is a perennial herb which flowers from May to June and produces wind dispersed seeds. The species can also reproduce vegetatively by forming rosettes that can separate from the parent plant or remain attached. Seedling survival seems to be from 1 to 5%.



Santa Clara Valley Dudleya
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Individual plants may live for approximately 10 years. They are susceptible to heavy frosts but can survive for up to 2 years in inhospitable conditions and still exhibit minimal stress

SERPENTINE SOIL PLANTS:

Serpentine soils are formed from weathered volcanic (ultramafic) rocks such as serpentinite, dunite, and peridotite. These soils provide a harsh environment for plant growth. Several factors contribute to the inhospitability of serpentine soils to plant growth

- 1) Low calcium-magnesium ratio;
- 2) Lack of essential nutrients such as nitrogen, potassium, and phosphorous; and
- 3) High concentrations of heavy metals (mineral toxicity).

However, serpentine plant species have adapted to serpentine soils and require them to survive.

See the [recovery plan](#) (above) for more information about serpentine soil species.

Contact the Coastal Branch of our office (formerly the Coast-Bay-Delta Branch) at 916-414-6625 for consultations concerning serpentine soil species.

The Bay Checkerspot Butterfly [PDF](#) | [RTF](#) is an insect that depends on serpentine soil plants, primarily dwarf plantain (*Plantago erecta*).

DISTRIBUTION

Coyote Valley area, from San Jose south about 30 kilometers (20 miles) to San Martin.

U.S. Geological Survey 7.5 Minute Quads: Mississippi Creek (405B) 3712124, Gilroy Hot Springs (405C) 3712114, Mount Sizer (406A) 3712125, Morgan Hill (406B) 3712126, Mount Madonna (406C) 3712116, Gilroy (406D) 3712115, Santa Teresa Hills (407A) 3712127, Los Gatos (407B) 3712128, San Jose East (427D) 3712137.

THREATS

Dudleya setchellii has always been restricted to the Coyote Valley area of Santa Clara County. The species is threatened by development, landfill activities, unauthorized dumping, quarry expansion, and off-road vehicles. Sixteen of the 20 known occurrences are partially or wholly on private land, and most are subject to various levels of threat from development.

REFERENCES FOR ADDITIONAL INFORMATION

[General references about California plants](#)

www.fws.gov/sacramento/es/plant_spp_accts/plant_references.htm

Kruckeberg, A.R. 1984a. California serpentines: Flora, vegetation, geology, soils, and management problems. University of California Press, Berkeley, California. 180 pp.

_____. 1984b. The flora on California's serpentine. *Fremontia* 11(5): 3-10.

McCarten, N.F. Various, mostly unpublished reports. See recovery plan.

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Last updated November 19, 2009